



" City of Carlisle " \*

PUMPING ARRANGEMENT

~~31~~

29

City of Carlisle



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SCALE :-  $\frac{1}{8}" = 1 \text{ FOOT.}$

DIMENSIONS:- 465'-0" B.P. x 64'-0" MLD. x 42'-8" TO UPPER DK, 32'-1 1/2" MLD. TO 2<sup>ND</sup> DK.

WATER BULKHEAD PIPES	1	1	1
BILGE PIPES	1	1	1
OIL FUEL & CARGO OIL PIPES	1	1	1
FRESH WATER PIPES	1	1	1
AIR & SOUNDING PIPES	1	1	1

DECK CONNECTIONS FOR O.E. & F.W. PILING.....\*

PIPES IN SHAFT TUNNEL.....\*

PIPING IN PIPE TUNNEL.....\*

BULGE & O.B. TANK PIPES & SUPPORTS FORWARD.....\*

LIST OF FITTINGS FOR PUMPING ARRG<sup>2</sup> (2 SHEETS).....\*

ALL PIPES DISCHARGING ARE TO BE OF HEAVY QUALITY MILD STEEL TYPING.  
CAST IRON BELLMOUTH STAINLESS ARE TO BE FITTED AS LOW AS POSSIBLE IN D.B. TANKS.  
CAST IRON ROSE STRUM BOXES ARE TO BE FITTED TO FRESH WATER & SUGAR SOLUTIONS.  
AIR PIPES FROM FRESH WATER & WATER BALLAST TANKS ARE TO BE OF MILD STEEL TUBING  
BY CAST IRON GOOSENECK TOP, FITTED WITH GAUGE SAFETY FITTINGS AS REQUIRED  
WITH ANTI-SABOTAGE PRECAUTIONS.  
ALL PIPES DISCHARGING ARE TO BE OF HEAVY QUALITY MILD STEEL TYPING FITTED WITH

ALL AIR PIPES TO BE 3/4" HIGH TO MOUTH AT UPPER DECK, A 18" HIGH ON POOP A P/LIN DECKS,  
SUCKING PIPES TO BE OF MILD STEEL, TURNING WITH THE STEERING WHEEL AT BOTTOM.  
NET HOLES, TO BE SURFICIAL GRABBERS, TO BE ARRANGED ON ALL SUCKING DECKS AND A  
PUMPING DECK, AND ALL AIR PIPES AND SUCKING PIPES TO BE ARRANGED IN SUCH A MANNER  
TO BE FITTED WITH LOCKING ARRANGEMENTS AS REQUIRED BY ANTI-BARRAGE PRECAUTIONS  
PUMPING AIRBORN IN MACHINERY SPACES TO BE PROVIDED BY ENGINEERS.  
SUCKING PIPES TO BE FITTED IN MACHINERY SPACES TO BE ARRANGED IN CONSULTATION  
WITH ENGINEERS.  
ALL SUCKING PIPES ARE TO BE JOINED WITH SENTINEL JOINTING,  
SEE SEPARATE DRAWING FOR ARRANGEMENT OF DOWNSIDE PIPES.

"City of Carlisle"

MIDSHIP SECTION

(As built)

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# No 1156. "CITY OF CARLISLE." MIDSHIP SECTION. [AS FITTED.] SCALE: - 1/2" = ONE FOOT.

DIMENSIONS: 465'-0" B.P. x 64'-0" MLD. x 42'-8" MLD. TO UPPER DK.  
x 32'-1 1/2" MLD. TO 2<sup>ND</sup> DECK.

TO CLASS 100A, WITH FREEBOARD SCANTLINGS SUITABLE FOR A  
MOULDED DRAFT WITH T.O. CLOSED OF 29'-7 1/4".

## SECTION THRO' HOLDS

### EQUIPMENT. [No 49610.]

2 BOWER ANCHORS 85/4 CWTs EACH STOCKLESS.
1 STRAIGHT " 75 CWTs WITH STOCK
210 FATHOMS OF 2 1/2" STUD CHAIN CABLE
1 AT 120 " 4 1/4" STEEL WIRE STEERING LINE
1 AT 130 " 5 1/2" " " " " " "
1 AT 140 " 5 1/2" " " " " " "
2 AT 30 " 3 1/2" " " " " " "
2 AT 100 " 2 3/4" " " " " " "
2 AT 100 " 2 3/4" " " " " " "
4 AT 75 " 2 3/4" " " " " " "
4 AT 40 " 7" " " " " " "
WITH 15 PMS 4" SISAL SHACKLED ON.

DK PLATING 5/16" FOR 1/4 L TO 3/8" AT ENDS  
BUTTS DOUBLE RIV FOR 1/4 L TO SINGLE  
AT ENDS WHERE NOT EXCEEDING 1/4".

NOTE: ALL B.A. SECTIONS ARE NEW BRITISH STANDARD  
REVISED JULY 1942.

## SECTION THRO' BOILER ROOM.

ALTERNATIVE SIDE FRAMING.

FRAMES 'A' & 'B' FITTED  
AT ALTERNATE FRAMES.

BILGE RADIUS 10'-0"  
BILGE KEEL 12'-4 1/2" B.P.  
WELDED TO FLAT BAR

87% (E)

82% (D)

82% (C)

83% (B)

(B) IN

(C) OUT

(D) IN

(E) OUT & IN

C.L. & Co. No 1156

Stern frame

②

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③

Rudder

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01800-01804-0214

17 JAN 1944

# No. 1156. RUDDER.

SCALE: 1"=1 FOOT.

RUDDER TO BE TO LLOYD'S REQUIREMENTS INSPECTION & TESTS  
AND TO BE PASSED BY SURVEYOR BEFORE LEAVING WORKS.

RUDDER STOCK — BEST QUALITY FORGED STEEL  
RUDDER ARMS — BEST QUALITY CAST STEEL

SURFACES OF ALL EXPOSED WELDS TO BE SMOOTHED OFF

## NOTES:

LENGTH 44' 3".  
LAND DRAFT OPEN BASIS 27' 10 1/2".  
CLOSED BASIS 23' 7 1/2".

SPEED 15.5 KNOTS  
TOTAL DISPLACEMENT OF RUDDER 11,500 LBS. C.O.G. OF AREA AHEAD FINISHES = 4'-25"  
 $A \times D = 171 \times 4.25 = 727$   
C.O.G. OF STERN AREA 12' 4" DIA. OTHER SCANTLING TO SUIT INCREASED DIA OF STOCKING  
KEELING ETC. TO BE CUT IN RUDDER STOCK TO PARTICULARS QUALITY LATER  
RUDDER STOCK TO BE ACCURATELY TURNED TO DIMENSIONS GIVEN  
CARE TO BE TAKEN THAT CENTRES OF FINISHES & CENTRE OF RUDDER STOCK  
ARE IN EXACT ALIGNMENT  
COCKING FINISHES TO BE ACCURATELY FINISHED

DIMENSIONS TO BE WORKED TO AS WE PAY ONLY ON WEIGHTS CALCULATED TO THESE SIZES

WRITTEN DIMENSIONS ONLY TO BE TAKEN  
EXPOSED EDGES OF CASTINGS TO BE ROUNDED OFF  
PATTERNS SUPPLIED BY MAKERS TO F.S. TRACINGS SUPPLIED WHICH ARE TO  
BE WORKED TO IN PREFERENCE TO PLAN.

SHIPBUILDERS TO BE INFORMED OF ANY PROPOSED DEVIATION FROM THIS DRAWING & SAME TO BE AGREED TO BEFORE PARTS ARE MADE

GAUGE FOR KEYWAY IN TUBES SUPPLIED BY CONTRACTOR

POINT GAUGES SUPPLIED BY CONTRACTOR

SURFACES TO WHICH PLATING IS ATTACHED ARE TO BE FLAT & FAIR, MACHINED OR DRESSED AS NECESSARY

LOADING OF ARMS TO SUIT STERN FRAME AS CAST

FINISHES COMPLETE WITH BRASS LINERS, LIGNUM VITAE FINISHES IN BRASS CAGES SUPPLIED BY CONTRACTOR

RUDDER TO BE TESTED TO 15 LBS PER SQ INCH (34 1/2 HEAD)

INSIDE OF RUDDER TO BE COATED WITH BITUMINOUS SOLUTION

NO RIVET HOLES TO BE BORED IN CASTINGS UNTIL LINED OFF BY OUR REPRESENTATIVE

ALL MACHINING & DRILLING TO BE DONE BY CONTRACTOR

MACHINING SHEET IN RED  
DRESSED & FAIR IN YELLOW

TP# 2.

DRAWN BY: [Signature]  
CHECKED BY: [Signature]  
DATE: 10/12/43

1' 10" LIFT WITH RUDDER ON MIDDLE LINE  
2' 6" AT 40°  
WORKING ANGLE 40°  
STOPPAGE 42°

SEE DETAIL PLAN FOR THE FINISHED LENGTH OF RUDDER STOCK  
KEYWAYS ETC.

